A17.E162
JACC March 9, 2010
Volume 55, issue 10A

CARDIAC FUNCTION AND HEART FAILURE

TROPONIN I IS CHRONICALLY AND PERSISTENTLY ELEVATED IN HOSPITALIZED HEART FAILURE PATIENTS AND IS ASSOCIATED WITH INCREASED MORTALITY OVER FIVE YEARS

ACC Oral Contributions
Georgia World Congress Center, Room B211
Tuesday, March 16, 2010, 2:15 p.m.-2:30 p.m.

Session Title: Circulating Biomarkers in Heart Failure
Abstract Category: Myocardial Function/Heart Failure--Clinical Nonpharmacological Treatment
Presentation Number: 0922-04

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Background: Baseline elevation of troponin I (TnI) has been associated with worse outcomes in heart failure (HF). However, prevalence of chronic persistent TnI elevation and its association with clinical outcomes is not well described.

Methods: In 510 patients with initial HF admission between 2002 to 2004, and subsequent hospital admissions up to May 2009, chronic persistent TnI elevation was defined as a level ≥ 0.05 ng/ml on ≥ 3 HF admissions. Baseline characteristics and all cause mortality were compared between chronic persistent TnI elevation (ChPerTnI) and control (noChPerTnI) groups.

Results: Mean age of our cohort was 68.4 yrs, 99.6% were male, 69% had ischemic etiology, 77.8% had NYHA class III-IV HF, mean LVEF was 25.8 ± 13.4%. Chronic persistent elevation of TnI was present in 40% of the cohort and 86% patients with ≥ 3 HF admissions. Mean TnI level was 1.11 ± 7.25 ng/ml in the ChPerTnI group. Ischemic etiology, hypertension, diabetes, chronic renal insufficiency and age did not differ between the two groups. LVEF tended to be lower in ChPerTnI group (25.3±12.3 , 30.0 ± 15.6, p=0.08). ChPerTnI was associated with higher mortality (HR 1.99, 95 % CI: 1.06-3.73, p=0.03, adjusted for LVEF) (fig) in the overall cohort.

Conclusions: TnI was chronically and persistently elevated in 40% of the hospitalized HF cohort, and 86% of patients with > 3 HF rehospitalizations. Chronic persistence of TnI elevation did not differ according to ischemic etiology, but was associated with higher mortality over 5 years.